

BRIEFING
OFFICE OF THE ASSISTANT ADMINISTRATOR
SOLID WASTE AND EMERGENCY RESPONSE
EPA, REGION 4

Florida Phosphate Mine Initiative
Region 4, Waste Management Division

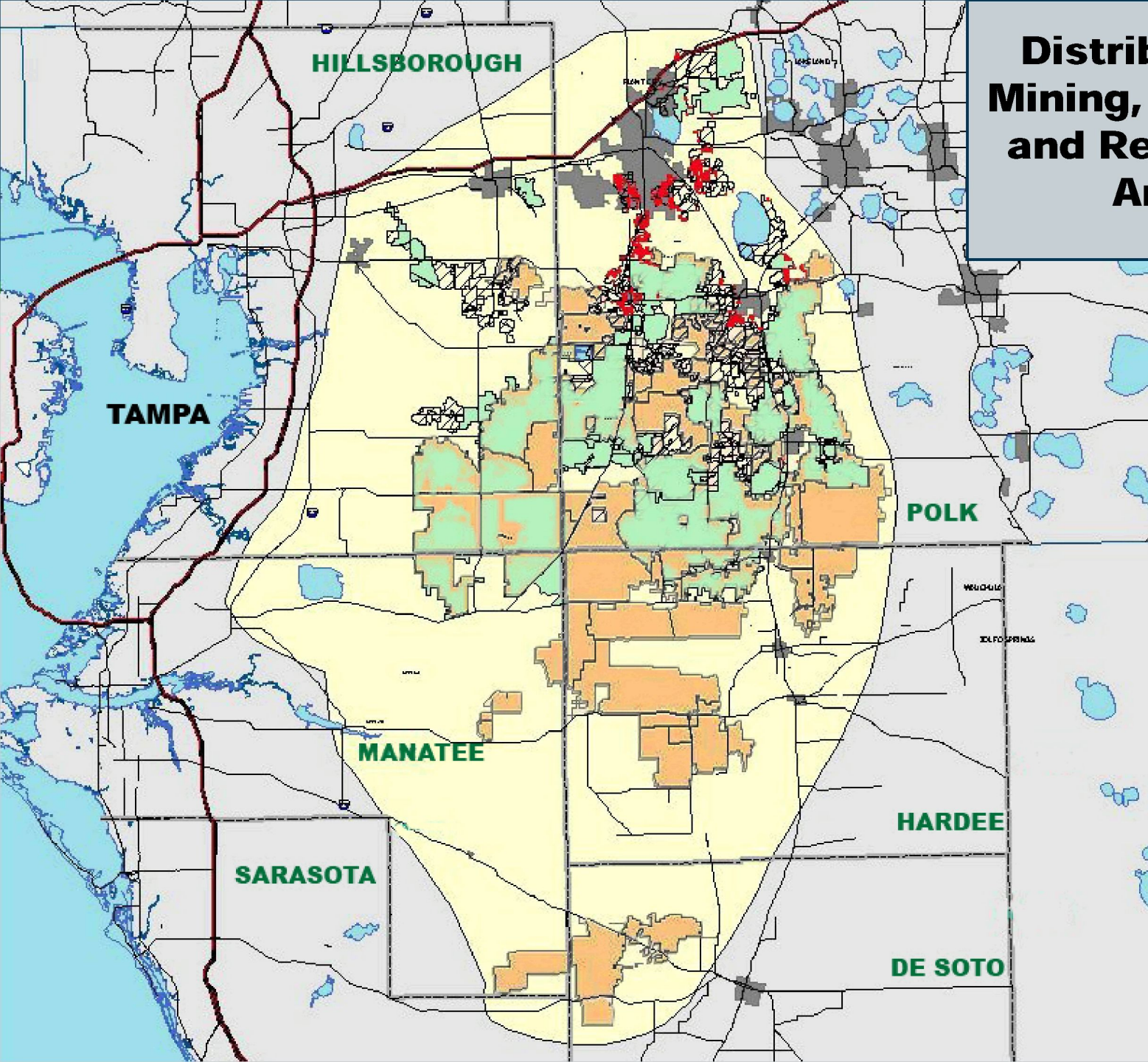
January 2006



U.S. Environmental Protection Agency



Distribution of Mining, CERCLIS, and Residential Areas



Legend

- All Mines Intersection
- Cerclis Intersection
- Nonmandatory
- Interstates
- County Line
- Cerclis Mining Sites
- Nonmandatory
- Towns
- Water Bodies
- Mandatory Mines
- Mineable Limit
- Counties

TENORM CRITERIA

Organization	Criteria			
	Dose (mRem/yr)	Exposure Rate (μ R/hr)	Ra ²²⁶ - Soil (pCi/g)	Chronic Risk
EPA, Superfund	--	20	5	10 ⁻⁴ to 10 ⁻⁶
DOD	--	--	5/15	--
DOE	100	--	5/15	ALARA
ATSDR	100	--	--	--
Florida, DOH	--	20	--	--
AL, GA, MS, SC, LA, TX	--	50	5	--
NCRP - General Population	100/500	--	--	ALARA
CRCPD	100	--	5	--

ACTION ITEMS

AUGUST 2005 OA, RA AND FL GOVERNOR MTG

- APPROPRIATE BACKGROUND RADIATION LEVELS
- CONSULTATION WITH ATSDR ON ASSESSMENT AND CLEANUP CRITERIA
- ORIA AND NRC CRITERIA AT YUCCA MTN
- REGIONAL COST-ESTIMATE BASIS
- REGIONAL DESK STATEMENT
- PRP INFORMATION

APPROPRIATE BACKGROUND RADIATION LEVELS

- AVERAGE ANNUAL DOSE FROM ALL RADIATION SOURCES IN U.S. ESTIMATED AT 360 MREM/YR
- EPA SUPERFUND RADIATION POLICY ADDRESSES RADIATION RISK THE SAME AS CHEMICAL RISK
- RADIATION LEVELS EVALUATED RELATIVE TO INDIVIDUAL BACKGROUND LEVELS FOR RADIOACTIVE ISOTOPES

CONSULTATIONS WITH ATSDR ON ASSESSMENT AND CLEANUP CRITERIA

- MULTIPLE CONSULTATIONS WITH ATSDR AND FDEP
- EPA AND ATSDR EVALUATE POTENTIAL PUBLIC HEALTH RISKS THROUGH DIFFERENT PROCESSES
 - EPA PROTECTS PUBLIC THROUGH MANAGEMENT OF RISKS FROM LONG-TERM EXPOSURES
 - ATSDR PROTECTS PUBLIC THROUGH IDENTIFYING THREATS TO PUBLIC HEALTH BASED ON OBSERVABLE HEALTH EFFECTS
- ATSDR SOIL CRITERIA APPROXIMATELY EQUIVALENT TO EPA'S ARAR OF 5 PCI/G
- OTHER ROUTES OF EXPOSURE SUCH AS RADIATION DOSE MAY RESULT IN DIFFERENT VALUES

ORIA AND NRC CRITERIA AT YUCCA MTN

- 15 MREM/YR CRITERIA PROPOSED FOR YUCCA MTN APPROXIMATELY EQUIVALENT TO 10^{-4} CANCER RISK
- 5 PCI/G FOR RADIUM APPROXIMATELY EQUIVALENT TO 10^{-4} CANCER RISK
- ALTHOUGH DIFFERENT CRITERIA (DOSE VS CONCENTRATION) THEY ACHIEVE THE SAME LEVEL OF PROTECTION

REGIONAL COST-ESTIMATE BASIS

- INITIAL ESTIMATE OF \$500,000 PER RESIDENTIAL LOT BASED ON DISPOSAL OF EXCAVATED WASTE AT LOW-LEVEL RADIATION FACILITY
- FURTHER REVIEW OF STATE AND FEDERAL REGS INDICATE EXCAVATED WASTE COULD BE DISPOSED OF AT SUBTITLE “D” LANDFILL OR GYPSUM STACK
- SUBTITLE “D” LANDFILL DISPOSAL COULD REDUCE COST TO \$230,000 PER RESIDENTIAL LOT
- GYPSUM STACK DISPOSAL COULD REDUCE COST TO \$105,000 PER RESIDENTIAL LOT

REGIONAL DESK STATEMENT

- REGIONAL DESK STATEMENTS DRAFTED FOR BOTH CERCLIS AND CERCLIS/RESIDENTIAL SURVEYS
- DESK STATEMENT TO BE FINALIZED PENDING DECISION ON SURVEY

PRP INFORMATION

Company Name	CERCLIS Site	Non-CERCLIS (Residential Areas)
Borden Chemical Co.	X	
Cargill, Inc.	X	
CF Industries, Inc.	X	
Cytec Industries	X	
Estech, Inc.	X	
Exxon Mobile Corp	X	X
Farmland Industries	X	

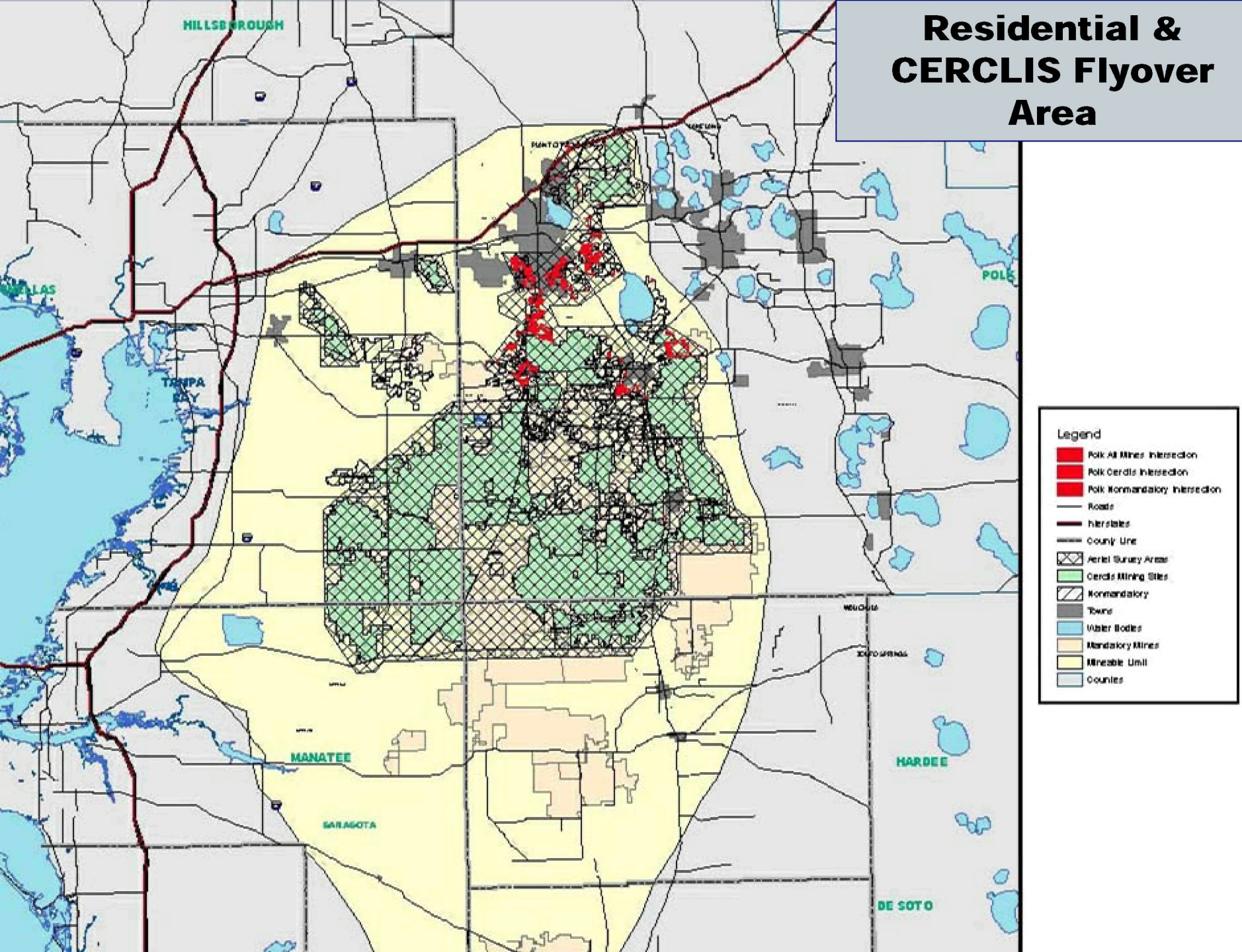
PRP INFORMATION (CONT.)

Company Name	CERCLIS Site	Non-CERCLIS (Residential Areas)
Freeport-McMoran Copper & Gold, Inc.	X	
IMC Global, Inc.	X	X
Mosaic Phosphates Co.	X	
US Agri-Chemicals Corp.	X	
US Steel Corp	X	X
W.R. Grace & Co.	X	X
The Williams Companies	X	

POTENTIAL AERIAL RADIATION SURVEY STRATEGIES

- CERCLIS SITES & RESIDENTIAL AREAS – 800 MI² AND \$1,200,000
- CERCLIS SITES – 700 MI² AND \$800,000
- RESIDENTIAL AREAS – 100 MI² AND \$700,000

Residential & CERCLIS Flyover Area



POTENTIAL ENFORCEMENT STRATEGIES

- FUND-LEAD ASSESSMENT
 - INVOLVEMENT OF PRPS ONCE SITES ARE IDENTIFIED
 - OPPORTUNITY TO PERFORM RI/FS
 - PROVIDE OPPORTUNITY FOR INPUT/COOPERATION
 - ATTEMPT TO ADDRESS SITES THROUGH SUPERFUND ALTERNATIVE PROCESS
- PRP-LEAD ASSESSMENT
 - PURSUE PRPS TO PERFORM AERIAL RADIATION ASSESSMENT AND RI/FS

POTENTIAL COMMUNICATION STRATEGY

- COORDINATE COMMUNICATION STRATEGY DEVELOPMENT AND IMPLEMENTATION WITH HQ AND STATE OFFICIALS
- DEVELOP COMPREHENSIVE COMMUNICATION STRATEGY
 - BRIEF FEDERAL, STATE, AND LOCAL ELECTED OFFICIALS SEVERAL WEEKS BEFORE START OF SURVEY
 - PROVIDE FACT SHEETS TO LOCAL GOVERNMENT AND LOCAL EMERGENCY PERSONNEL TO ASSIST IN RESPONDING TO POTENTIAL QUESTIONS
 - NOTIFY MEDIA AND INDUSTRY OF SCOPE OF PLANS APPROXIMATELY ONE TO TWO WEEKS PRIOR TO SURVEY THROUGH FACT SHEETS/PRESS RELEASES AND AVAILABILITY SESSIONS
 - ANTICIPATE RESPONSE TO DIRECT INQUIRIES FROM PUBLIC

SCHEDULE CONSIDERATIONS

- IMPLEMENTATION IN SPRING 2006 DIFFICULT
 - CONTINUED DEVELOPMENT OF APPROPRIATE CLEANUP CRITERIA
 - SEASONAL LIMITATIONS (OPTIMAL SURVEY TIME IN DRY SEASON - NOVEMBER THROUGH MAY)
 - FUNDING
 - PLANNING/IMPLEMENTATION REQUIREMENTS